

### **Remarks**

Claims 9-14, 20, 22-24, 26-33 are now pending in the application and stand rejected in the Office Action. Applicant has amended claim 9, cancelled claims 20, 22-24, and added new claims 34-40. Upon entry of the amendments, claims 9-14, 26-40 remain pending.

Support for the amendments is found in the specification and claims as originally filed. For example, support for the amendment to claim 9 is found in paragraph 10, last sentence, and in paragraph 14 of the specification. Specifically, paragraph 10 states that hardened surfaces provided by methods of the invention are stable to higher temperature than those in the prior art. Paragraph 14 demonstrates that the prior art includes the DiChiara patents that call for producing porous ceramic bodies without using a boron containing compound. New claims 34-40 recite the use of boron carbide in slurries of the invention. Support for claims 34-40 is found throughout the specification, for example, in the Example (paragraph 31). Applicants respectfully request entry of the Amendments.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 9-14, 20-24, and 26-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the DiChiara reference in view of the Kourtides reference, while claim 23 is rejected over the DiChiara reference and the Kourtides reference in further view of the Baker reference. Applicant respectfully traverses the rejection as applied to the amended claims and requests reconsideration.

For a rejection of claims under § 103 over a combination of references to be sustained, there must be a motivation to combine the references. Furthermore, the combined references must teach or suggest each and every limitation of the rejected claims.

The cited references do not teach each and every limitation of amended claim 9. Specifically, claim 9 has been amended to recite that the method produces a porous ceramic body stable to higher temperatures than the ceramic bodies produced without the at least one boron containing compound of the invention. Applicant continues to urge that the references are not properly combinable for reasons discussed in previous Office Action Responses. For example, the tiles of the DiChiara reference and the Kourtides references are different in that the composite tiles of the Kourtides reference contain an outer layer of silicon carbide fabric onto which the coating compositions are applied. *See Column 12, lines 21-31*. Also, in the Kourtides

reference, a coating is applied as a separate layer as indicated in Figure 3, whereas in the DiChiara reference, the applied coating does not form a separate identifiable layer. But even were the references to be combined, Applicant respectfully submits that the combined references do not teach all of the limitations of amended claim 9 as cited above. Specifically, there is no teaching in the combined references that the method produces porous ceramic bodies stable to higher temperatures. For this reason, Applicant respectfully submits that claims 9-14 are patentable over the cited references. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Similarly, the references when combined do not teach or suggest the limitation of claims 26-33, that the surface protected body can be heated to 2500°F for 20 hours without cracking. Based on the failure of the references to teach the limitation, and for the reason discussed above with respect to claims 9-14, Applicants respectfully submit that claims 26-33 are patentable over the cited references. Accordingly, Applicant respectfully request that the rejection be withdrawn.

#### **New Claims 34-40**

Even if a prima facie case of obviousness is made out in view of a combination of references, the prima facie case may be overcome by showing of unexpected results commensurate in scope with the claims. The showing of unexpected results may be provided by affidavit or may be contained in the specification itself.

New claims 34-40 are drawn to methods wherein the slurry contains a boron containing compound comprising boron carbide. The Example and the comparative Example of the current specification demonstrate the unexpected result that the use of boron carbide in the slurry raises the temperature stability at 2500°F of a tile treated with such a slurry. For these reasons, Applicant respectfully submits that even if a prima facie case of obviousness may be made out from a combination of the DiChiara and the Kourtides references, it is overcome by the showing of unexpected results described. Accordingly, Applicants respectfully submit that claims 34-40 are also patentable over the cited references.

### Conclusion

For the reasons discussed above, Applicants believe that claims 9-14, and 26-40 are in an allowable condition and respectfully request an early notice of such allowance. The Examiner is invited to telephone the undersigned if that would be helpful to resolving any issues.

Respectfully submitted,

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